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ABSTRACT

This document contains four papers from a symposium on cost analysis, evaluation, and feedback in human resource development. "Training Evaluation with 360-Degree Feedback" (Froukje A. Jellema) reports on a quasi-experimental study that examined the effectiveness of 360-degree feedback in evaluating the training received by nurses in a Dutch hospital and yielded evidence indicating that, contrary to expectations, greater levels of behavioral change occurred among the controls than among the nurses with whom 360-degree feedback was used. "Theory-Driven Evaluation: An Alternative" (Katie Robertson) offers theory-driven evaluation as a model that is better capable of accounting for the complex relationship between human resource development (HRD) interventions and intended outcomes than existing HRD evaluation models. "Creation and Utilization of Evaluative Information for Organizational Learning" (Youngsook Song) draws upon the literature to define the meaning of organizational learning and examine organizational conditions enabling organizations to promote learning at different levels and in different ways. "The Effects of Performance Feedback upon Small Businesses: A Literature Review" (Sonji Lee, Karen K. Yarrish, Patricia Bederman Miller) explores the literature on performance feedback in small businesses and investigates the relationships and significance of performance feedback to the theory and practice of human resource development. The last three papers include substantial bibliographies. (MN)

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Training Evaluation With 360-Degree Feedback

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Training evaluation is an important issue in many organizations. Even though organizations are becoming more interested to measure the effects of their training investments, organizations often lack the tools for the measurement of training effects, especially at the level of changed behavior. This paper will focus on the use of 360-degree feedback for evaluation of changed behavior as a result of training. The results of an experimental study in a large Dutch hospital will be described and discussed.

Keywords: Training Evaluation, 360-degree Feedback, Behavioral Change

Human resource development (HRD) is a process of developing and unleashing human expertise through organization development and personnel training and development, for the purpose of improving performance (Swanson, 2000 AHRD). Training evaluation can be useful to find out whether investments in training are contributing to performance improvement. One evaluation focus is changed behavior as a result of training (Kirkpatrick, 1994). Though change in behavior is in most cases not an end in itself, it is a necessary intermediary step to evaluate whether the training contributes to performance improvement. That is why in this paper the focus is on the evaluation of behavioral change.

Evaluation of changed behavior is done for only 11 percent of the training programs, though companies expect to increase this proportion in the future (1999 ASTD report). A main reason why training evaluation is not often focused on behavioral change of trainees, is the lack of appropriate methods. The specific aim of this paper is to examine one particular method that may be useful in this context. This method is 360-degree feedback, where employees receive feedback about behavior from a 'full circle' of co-workers such as the supervisor, peers, subordinates and clients. 360-degree feedback may be used to determine whether co-workers have experienced a difference in the behavior of the trainee. The main research question of this paper is whether 360-degree feedback is indeed useful for training evaluation.

Theoretical Framework

Though the use of 360-degree feedback for training evaluation is often mentioned in evaluation handbooks (see for example Brown and Seidner, 1998; Kirkpatrick, 1994; Robinson and Robinson, 1989), this method has rarely been studied in an evaluation context, though often in an employee developmental context.

One study in which 360-degree feedback is used to evaluate a training program, is the study by *McLean, Sytsma, and Kerwin-Ryberg (1995)*. This study included 73 ratees, who received 360-degree feedback both before and two years after a training program. Though participants' skills increased during these two years, it was difficult to attribute this behavioral change to the training program, due to the long period between pre- and posttest and the fact that a control group was not included. The authors
concluded that 360-degree feedback should be applied very cautiously as a tool to evaluate training.

Another study, in which 360-degree feedback is used for training evaluation, and in which a design with a control group was used, is the study of *Van Sandick and Schaap-Neuteboom (1993)*. This study was situated in a large Dutch supermarket chain and focused on a training program for department-managers. This study included 162 ratees, distributed over two training groups and one control group. In this study a training effect was measured (i.e. 0.2 on a 5-point scale). However, this study was limited by the fact that only one supervisor and one peer were involved in the feedback.

Another example is the study of *Rosti and Shipper (1998)*, where 360-degree feedback is used to study the impact of training in a management development program based on 360-degree feedback. Feedback was collected both before and after the program to enhance learning and evaluate training. Results, when analyzed by means of a series of four matched-pairs tests, were supportive that the change in the experimental group was significantly different than the change for the control group, and in the expected direction.

Since organizations are becoming more interested in measuring behavioral change as a result of training, it is interesting to study the usefulness of 360-degree feedback for this purpose. Since previous studies in this area are rare and often limited, it was decided to use as strict an experimental design as possible to again look at the usefulness of 360-degree feedback for training evaluation.

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Research Questions

The main research question of this paper is whether 360-degree feedback can be useful for training evaluation. More specifically, the questions are:

1. Is training evaluation by means of 360-degree feedback reliable?
2. Is training evaluation by means of 360-degree feedback valid?
3. What training effects are found with 360-degree feedback?

Methodology and/or Research Design with Limitations

The methodology that is used to answer the questions, is a quasi-experimental study. This study is situated in a large Dutch hospital. Recently, this hospital has created a new professional job for nurses, the senior nurse, hierarchically situated below the head nurse. All senior nurses have to attend the course, that has been specifically developed for this function. This is an extensive course, consisting of 18 outdoor training days during a nine-month period. Coaching skills are an important part of the program.

At the time of this study, about 40 senior nurses were working at the hospital. Though all senior nurses have to participate in the program, only 14 nurses could attend at the same time. That is why it was possible to study three conditions. Group 1 had already started with the program at the beginning of this study and received only a 360-degree feedback post-test. Group 2 received a pretest with 360-degree feedback before attending the program, and afterwards a posttest with 360-degree feedback. Group 3 received the feedback at the same time as group 2, but did not attend the program. All post-tests took place after ten training days, about seven months after the pretest. It would have been preferred if the post-measurement had taken place at the close of the training program, but that excluded the use of a control group, since group 3 would have started with the training by then.

The Dutch 360-degree feedback instrument Reflector was used in this study, consisting of eight behavioral competencies: dealing with stress, integrity, active listening, creating partnership, diagnostic skills, stimulation, giving feedback, and adapting. Each behavioral competency consists of five items, so the questionnaire included 40 items. The response scales that are used in Reflector are 5-point scales were raters select a position between opposite statements of behavior. The reliability and validity of Reflector has been examined in previous studies (see Jellema, Visscher and Mulder, 2000) and was found to be satisfactory.

Each senior nurse was allowed to select his or her own raters, but preferably their supervisor, two peers and four subordinates. Clients (in this case: patients) were not included. The ratees were encouraged to ask the same raters to provide feedback at the pre- and posttest, for as far as this was possible. All ratings could by given anonymously. After the results were analyzed, the results were summarized in reports and send to the home addresses of the ratees. All ratees were invited to join in a follow-up session.

The post-tests included a retrospective self-test and a questionnaire with questions regarding background, motivation for the training program, perceived support on-the-job, etc. Out of group 2 and 3, eight senior nurses were found willing to participate in a coaching simulation, that took place at the time of the post-test. Main purpose was to study correlation between 360-degree feedback (post-test) scores and scores of the simulation and thus to gain insight into the validity of 360-degree feedback. The research design is summarized in Table 1.

Table 1. *The research design of this study*

Group 1	training	360° & retrospective self & background	
Group 2	360°	training	360°& retrospective self & background & coaching simulation
Group 3	360°	no training	360°& retrospective self & background & coaching simulation

Response

At the start of the study each group consisted of 14 senior nurses. However, several senior nurses could not partake because they were ill (especially in group 3, the group that was on the waiting list for the program), left the organization or did not want to cooperate. At the posttest, again several nurses were ill and could not participate. Table 2 summarizes the response.

Table 2. *Response of the evaluation at the OLVG*

	Pre-test	Post-test		Post-test		
	360	360	Background & Retrospective	360	Background & Retrospective	Simulation
Group 1		n= 13 (95 raters)	n= 13			
Group 2	n=12 (86 raters)			n = 12 (78 raters)	n = 12	n=4
Group 3	n = 9 (69 raters)			n = 7 (48 raters)	n = 7	n=4

In this paper, the focus will be on group 2 and 3, since these groups received a pre- as well as a posttest. The pretest included 21 senior nurses, 12 in the experimental group and nine in the control group. A total of 155 raters were involved, an average of 7.4 raters for each ratee. Raters were divided as follows: self (21), supervisors (20), peers (62) and subordinates (52). At the posttest, a total of 18 senior nurses again participated in the 360-degree feedback. One senior (in group 2) participated in the posttest but had not participated in the pretest. A total of 126 raters were involved, an average of 6.6 raters for each ratee. Raters were divided as follows: self (19), supervisors (17), peers (50) and subordinates (40). About 35% of the seniors had asked exactly the same raters as at the pretest. In the other cases, one or more of the raters at the posttest had not been included in the pretest. All senior nurses filled in the questionnaire with background questions and the retrospective questionnaire.

Since this study was a quasi-experimental study, and the groups were not selected at random, they were compared on several variables to find out if they were different (see Table 3).

Table 3. *The two groups compared on several variables*

Variable	Group 2 (n=12)	Group 3 (n= 9)
Gender	53.8% female; 46.2% male	77.8% female; 22.2% male
Age	36 (4.6)	34 (8.1)
Working experience	12.2 (5.4)	12.7 (9.6)
Experience senior nurse	.8 (1.3)	2 (1.8)
Experience coaching	66.7%	88.9%
Perceived need to develop coaching skills	8.3% very high; 75% high	11.1% very high; 66.7% high
Motivation for program	25% very high; 66.7% high	22.2% very high; 66.7% high

As can be seen in Table 3, the groups are different on many of these variables. However, differences between groups were tested by means of chi-square (gender and experience with coaching), ANOVA (age and need to develop coaching skills) and Kruskal Wallis (experience and motivation), and none of the differences are significant. This is probably due to the limited number of respondents that was involved in this study.

This limited number of respondents and the fact that respondents were not selected at random for each training group, is the main limitation of this study. Interpretation of results may be difficult due to this limitation. In addition, the ratees that were included at the pretest are not always (though often) the same individuals as the ratees at the posttest. In addition to this, it is a limitation of this study that it was not possible to train the raters in advance.

Results

In this section the following results will be presented: the psychometric properties of the 360-degree feedback instrument and the measurement of behavioral change as a result of the training.

Psychometric Properties of the 360-degree Feedback Instrument

In this section the focus will be on the internal consistency and inter-rater reliability and validity of the instrument.

Internal Consistency. Internal consistency is measured by means of reliability analysis of the scales. The analysis is done on the complete data set (pre- and posttest, including group 1). Table 4 summarizes the alpha coefficients.

Table 4. Internal consistency of the scales

Competency	Alpha
Active listening	.60 (n=357), .68 after deleting item 2
Creating partnership	.66 (n=341)
Diagnostic skills	.76 (n=333)
Stimulation	.70 (n=336)
Giving feedback	.74 (n=353)
Adapting	.81 (n=326)
Integrity (control competency)	.72 (n=356)
Dealing with stress (control competency)	.78 (n=349)

Two scales are below .7, i.e. active listening and creating partnership. The alpha of active listening can be increased to .68 by removing one item. The alpha of creating partnership and the other behavioral competencies can not be increased by removing items. When all items are considered as one scale ('coaching skills'), the alpha is .94 (n=272)

Inter-rater Reliability

Since most of the senior nurses have received feedback from more than one peer and/or subordinate, it is interesting to see if scores within each rater-source are more or less the same. Since many ratees have feedback from three or more peers and/or subordinates, it was not possible to use a correlation coefficient. That is why the standard deviation is used as a measure for within-source agreement. The data was first analyzed separately for each ratee after which an average score for all ratees was computed. The standard deviation is computed for all competencies and for an overall score of all competencies. Table 5 shows the average standard deviation for peers and subordinates.

Table 5. *Within-source standard deviation for peers and subordinates*

Competency	Peers	Subordinates
Dealing with stress	0.48 (n=44)	0.41 (n=39)
Integrity	0.33 (n=44)	0.39 (n=38)
Active listening	0.44 (n=44)	0.43 (n=40)
Creating partnership	0.48 (n=44)	0.49 (n=39)
Stimulation	0.43 (n=44)	0.48 (n=38)
Diagnostic skills	0.52 (n=43)	0.49 (n=38)
Adapting	0.48 (n=44)	0.59 (n=39)
Giving feedback	0.43 (n=44)	0.44 (n=39)
Overall score	0.45 (n=44)	0.46 (n=40)

The average overall standard deviation for peers is .45. This differs slightly for each behavioral competency, with most agreement between peers on integrity and less agreement on diagnostic skills. The average overall standard deviation for subordinates is .46, which again differs slightly for each behavioral competency. Most agreement between subordinates is on integrity and less agreement on adapting.

Since the main characteristic of 360-degree feedback is that several different rater sources are included, it is interesting to study agreement between rater-sources. Whenever a ratee has two or more peers and/or subordinates, an average score for these raters is computed. This average peer-score and average subordinate-score is used in the analysis. The analysis is based on the complete data set (both pre- and posttest, including group 1). For each ratee, a score was computed for self, supervisor, peer and subordinate. These scores were averaged for all ratees. In Table 6, the average scores are summarized.

Table 6. *Average score 360-degree feedback*

Competency	Self (n=53)	SV (n=50)	P (n=52)	SO (n=50)
Dealing with stress	4.03 (.61)	4.00 (.75)	3.96 (.55)	4.10 (.52)
Integrity	4.51 (.38)	4.57 (.38)	4.48 (.33)	4.44 (.51)
Active listening	4.01 (.44)	3.87 (.60)	3.90 (.38)	3.99 (.48)
Creating partnership	3.96 (.42)	3.96 (.67)	3.92 (.43)	3.90 (.58)
Stimulation	3.96 (.46)	4.01 (.64)	3.97 (.40)	4.04 (.43)
Diagnostic skills	4.00 (.43)	4.00 (.57)	4.05 (.41)	4.08 (.52) (n=49)
Adapting	3.97 (.57) (n=52)	3.87 (.74)	3.94 (.50)	3.98 (.58)
Giving feedback	4.08 (.45)	4.06 (.60)	4.15 (.41)	4.22 (.44)
Overall score	4.06 (.35)	4.04 (.54)	4.05 (.33)	4.09 (.45)

SV=supervisor; P=peers; SO = subordinates

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As can bee seen, the overall scores of all rater-sources are very similar. The standard deviation in Table 6 indicates the differences between ratees. When the assumption is that ratees have different levels of performance, this coefficient should be large; it is, however, rather low.
Correlation between these sources was studied by means of T-tests, since the scores appear to be normally distributed. In Table 7 the coefficients are summarized. The marked coefficients are significant (at .95 level).

Table 7. *Correlation between rater-sources*

Competency	S-SV (n=50)	S-P (n=52)	S-SO (n=50)	SV-P (n=49)	SV-SO (n=47)	P-SO (n=49)
Dealing with stress	0.39*	0.20	0.08	0.44*	0.30	0.31*
Integrity	0.11	-0.04	0.05	0.15	0.27	0.00
Active listening	0.27	-0.03	0.09	0.07	0.12	0.04
Creating partnership	0.22	0.20	-0.13	0.17	0.26	0.06
Stimulation	0.18	-0.02	0.15	0.12	0.30*	0.07
Diagnostic skills	0.27	0.05	0.02	0.23	0.24	-0.16
Adapting	0.35*	0.23	0.11	0.41*	0.29*	0.01
Giving feedback	0.32*	0.03	-0.02	0.28	0.16	-0.01
Overall score	0.34*	0.00	0.03	0.29*	0.32*	0.03

SV=supervisor; P=peers; SO = subordinates

The fact that correlation appears to be moderate for most competencies and rater-sources, implicates that scores should by presented for each rater-source separately. This is in accordance with what you might expect for 360-degree feedback. Correlation between peers-subordinates, peers-self and self-subordinates, is in some cases even negative. When the correlation of the overall score is used as a measure of rater-correlation, the correlation between supervisor-self, supervisor-peer, and supervisor-subordinates is significant. These correlation coefficients are in agreement with the low correlation that is often found in other studies (see for example Harris and Schaubroeck, 1988). However, correlation between self-peer, self-subordinate and peer-subordinate are much lower than have been found in previous studies. Interesting to note is that the correlation between the supervisor and any of the other rater sources is significant, while correlation between the other sources is not significant.

Validity

To study the validity, the 360-degree feedback scores were compared to another, more objective, measure of the same behavior. Eight senior nurses were found willing to participate in a coaching simulation that consisted of a coaching conversation that the senior nurse had with an employee, played by an actress. The simulation focused on some of the competencies that had been included in the 360-degree feedback, i.e. active listening, creating partnership, diagnostic skills and stimulation. The eight conversations were recorded on videotape and two masters students evaluated the videotapes by means of the same questionnaire that was used for the 360-degree feedback. The students were trained in advance (with an extra videotape) to use the instrument and assess the coaching behavior. Each student rated each ratee, after which they discussed the results and tried to come to agreement. Since each student-score correlated significantly with the agreement-score, this agreement-score is used in the analysis. Because the simulation was in the same period as the 360-degree feedback posttest, the posttest scores are used. Table 8 shows the correlation that was found.

Table 8. *Correlation between 360-degree feedback and coaching simulation*

	Sim-360 Self (n=8)	Sim-360 SV (n=8)	Sim-360 peers (n=8)	Sim-360 SO (n=8)
Active listening	-.16	-.58	.31	-.70
Creating partnership	.17	-.33	.25	-.31
Diagnostic skills	-.25	-.72*	.40	-.44
Stimulation	-.44	-.60	.29	-.58

SV=supervisor; SO = subordinates

As can be seen, the correlation between the 360-degree feedback and simulation is in most cases negative. Only peers have a positive (though not significant) correlation with the simulation-score.

Measuring Behavioral Change as a Result of Training

In this section the focus is on the gain scores between pre- and posttest. First, it is important to focus more specifically on the self-scores, since these may be sensitive to 'response-shift bias': because ratees in group 2

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receive intensive training of coaching skills, their ideas about coaching may change. This may result in the fact that self-scores at the posttest are based on another perspective of coaching, which makes them difficult to compare with the pretest scores. Self-scores could be lower at the posttest, even though performance has improved, because trainees have learned how difficult coaching actually is and are more demanding of their own performance. The same process may happen for ratees in group 3, who received no training but who did receive a feedback-report after the pretest, joined in a follow-up meeting and were encouraged to make a personal development plan. These individuals may also have changed their ideas about coaching. That is why a retrospective self-test was included with the posttest, where ratees were asked to again rate their coaching skills at the time of the pretest. Correlation between pretest self-scores and retrospective scores was studied by means of a T-test (see Table 9).

Table 9. *Correlation between 360-degree pre self-score and retrospective self-score*

Competency	Pretest self-score	Retrospective self-score	Correlation
Dealing with stress (n=31)	4.01	3.81	.68*
Integrity (n=31)	4.46	4.41	.40*
Active listening (n=31)	3.93	3.55	.43*
Creating partnership (n=30)	3.89	3.65	.09
Stimulation (n=31)	3.92	3.55	.31
Diagnostic skills (n=31)	3.94	3.59	.42*
Adapting (n=30)	3.95	3.64	.53*
Giving feedback(n=31)	3.93	3.78	.43*

Though the retrospective self-scores are indeed lower than the pretest self-scores, this is for most competencies not significant. That is why the pretest scores will be used in the further analysis.

In Table 10, the pre- and posttest scores are summarized. Again, the score for peers and subordinates is based on the average score. A paired samples T-test analysis was executed, to see if differences between pretest and posttest are significant (the significant differences are again marked in Table 10). Whenever there is a (-) in the table, this indicates that the posttest scores are lower.

Table 10. *Pre- and posttest scores of group 2 and 3*

Group 2								
Competency	**Pretest**				**Posttest**			
	S	**SV**	**P**	**SO**	**S**	**SV**	**P**	**SO**
Dealing with stress	3.82	3.70	3.84	4.17	3.96	4.06	4.22	3.98 (-)
Integrity	4.42	4.26	4.46	4.40	4.48	4.66	4.52	4.34 (-)
Active listening	3.87	3.58	3.80	4.08	4.03	4.10	4.08*	4.03 (-)
Creating partnership	3.90	3.50	3.96	3.98	4.03	4.16	3.91 (-)	3.74 (-)
Stimulatio n	3.81	3.64	3.96	4.05	4.00	4.32*	4.09	3.97 (-)
Diagnostic skills	3.78	3.56	3.97	4.18	4.05	4.20	4.25*	3.98 (-)
Adapting	3.69	3.36	3.96	4.03	3.95	4.36*	3.94 (-)	3.80 (-)
Giving feedback	3.90	3.56	4.10	4.33	4.15*	4.32*	4.33	4.24 (-)
Overall score	**3.90**	**3.64**	**4.00**	**4.15**	**4.08**	**4.27***	**4.17**	**4.01 (-)**
Group 3								
Competency	**Pretest**				**Posttest**			
	S	**SV**	**P**	**SO**	**S**	**SV**	**P**	**SO**
Dealing with stress	4.09	4.10	3.83	4.04	4.26	4.63*	3.81 (-)	4.12
Integrity	4.34	4.43	4.33	4.48	4.80*	4.87	4.49	4.34 (-)
Active listening	3.97	3.53	3.76	3.94	4.26	4.33*	3.87	3.79 (-)
Creating partnership	3.72	3.63	3.71	4.06	4.14*	4.27*	3.89	3.89 (-)
Stimulation	3.74	3.43	3.86	4.15	4.00	4.50*	4.02	4.07 (-)
Diagnostic skills	3.90	3.70	3.92	4.17	4.17	4.47*	3.99	3.99 (-)
Adapting	3.81	3.10	3.73	4.22	4.14	4.17*	4.01	3.89 (-)
Giving feedback	3.83	3.67	3.89	4.31	4.46*	4.63*	4.17	4.00 (-)
Overall score	**3.93**	**3.70**	**3.88**	**4.17**	**4.28**	**4.48***	**4.03**	**4.01 (-)**

SV=supervisor; P=peers; SO = subordinates; (-) = the posttest lower than the pretest

As can be seen, both group 2 and 3 have higher posttest scores than pretest scores for most behavioral competencies. Supervisors of both groups, have often significantly higher scores at the posttest, as well as the ratees of group 3 themselves. Peers in group 2, are also significantly more positive at the posttest than at the pretest for two competencies (active listening and diagnostic skills). However, subordinates of both groups are more negative (though not significantly) at the posttest.

Next, group 2 and 3 were compared to see if the gain scores between these two groups are different from each other. Since group 2 is the training-group, it was expected that the gain scores of this group are higher than the scores of group 3. The results are summarized in Table 11 (marked coefficient is significant).

Table 11. Gain scores of group 2 and 3

Competency	Group 2				Group 3			
	S	SV	P	SO	S	SV	P	SO
Dealing with stress	0.14	0.36	0.38	-0.19	0.17	0.53	-0.02	0.09
Integrity	0.07	0.40	0.07	-0.06	0.46*	0.43	0.16	-0.14
Active listening	0.17	0.52	0.28	-0.05	0.29	0.80	0.11	-0.16
Creating partnership	0.13	0.66	-0.05	-0.23	0.42	0.63	0.18	-0.17
Stimulation	0.19	0.68	0.13	-0.07	0.26	1.07	0.16	-0.07
Diagnostic skills	0.27	0.64	0.28	-0.20	0.27	0.77	0.07	-0.18
Adapting	0.26	1.01	-0.02	-0.23	0.33	1.07	0.28	-0.32
Giving feedback	0.25	0.76	0.23	-0.08	0.63	0.97	0.28	-0.31
Overall score	0.18	0.63	0.17	-0.14	0.35	0.78	0.15	-0.16

SV=supervisor; P=peers; SO = subordinates

As can be seen in Table 11, most rater sources indicate positive gain scores, with an exception for subordinates and for peers (regarding some competencies). A first quick look seems to indicate that the gain scores in group 3 are, contrarily to what might be expected, higher than those of group 2. However, in only one case is this difference significant, and more positive, for group 3.

Discussion

This study focused on the use of 360-degree feedback in a training evaluation context. First the focus was on the psychometrical properties of 360-degree feedback. Results indicate that the psychometrical properties with regard to internal consistency of the scales and inter-rater reliability are more or less in accordance with previous research. Alphas of most scales are sufficient (.70 or higher). Within-source agreement, measured by means of the standard deviation, was found to be high (.45 for peers and .46 for subordinates). However, this may be caused by the fact that the scores of most raters are very positive, as can be seen in the overall scores for each rater source (ranging from 4.04 to 4.09 on a 5-point scale). Subordinates appear to be slightly more positive than the ratees themselves, who are in their turn slightly more positive than peers are. Supervisors are of all rater-sources the least positive. However, note that this is still a very positive score. Interesting is also the fact that supervisors are the only rater-source that significantly correlate with the other rater sources. All other combinations have extremely low correlation.

Next, the 360-degree feedback scores were compared with scores of a 'more objective' method, i.e. a coaching simulation. The 360-degree feedback scores were negatively correlated, though except for one case not significant, with the coaching simulation. Only peers have a positive, though not significant, correlation with the simulation score. This is interesting since subordinates were expected to have the most relevant view in this case, since they are the individuals that are being coached by the senior nurse. However, the peers in this case are other senior nurses, who work closely with the ratee so they may also be a relevant rater-source. Nevertheless, these results do not support 360-degree feedback as a valid method.

Next, the focus was on the ability of 360-degree feedback to measure behavioral changes. First, pretest self-scores were compared with retrospective self-scores, to study response-shift bias. It appeared that retrospective self-scores are lower than pretest self-scores, for all competencies. The fact that retrospective scores are lower, though except for creating partnership and stimulation not significantly lower, may imply that response-shift bias actually took place. However, lower retrospective scores may also have different reasons, such as the fact that ratees lower their scores after they have seen the pretest feedback report, for example because they were 'over-raters' at the pretest.

Gain scores for the experimental group and the control group were compared to see if, according to what was expected, the experimental group improved more than the control group. However, the opposite seemed to be the case. Though ratees in both groups have higher posttest scores than pretest score from themselves, their supervisors, and their peers (except for some competencies), it is striking that the subordinates' gain scores of both groups are negative. This is interesting, since subordinates are expected to have the most relevant view in this case because they are the ones that are being coached by the senior nurse. An explanation could be that the pretest has raised the consciousness of subordinates of what to expect from a coach. A similar process as the 'response-shift bias' of trainees, could also have happened to subordinates, resulting in different expectations of their coach at the time of

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the posttest. In a follow-up study interviews with participants will be used to answer the question why subordinates have lower posttest scores. Interesting is also that the supervisors have the highest gain scores. Though supervisors of both ratees in group 2 and group 3, have the lowest pretest scores for almost all competencies, they have the highest posttest scores for almost all competencies. Again, interviews will be used to try to explain this result.

The results further seem to indicate that the gain scores in group 3 are, contrarily to what might be expected, higher than those of group 2. This is especially the case for self-scores and supervisor-scores. For peers, the results are more mixed, with sometimes higher scores for group 2 (dealing with stress, active listening, and diagnostic skills and overall score) and sometimes higher scores for group 3 (integrity, creating partnership, stimulation, adapting and giving feedback). For subordinates the results are also mixed, sometimes higher (or better to say: less negative) for group 2 (integrity, active listening, adapting, giving feedback and overall score) and sometimes for group 3 (dealing with stress, creating partnership, and diagnostic skills). However, in only one case is this difference in gain scores significant, and more positive, for group 3.

As table 3 has shown, the groups were different on several variables. Respondents in group 2 are more often male and on average two year older than respondents in group 3. In addition, respondents in group 3 indicate that they have more experience as a senior nurse and more experience with coaching. It may be the case that senior nurses must have some experience in their new job as a senior, and especially with coaching, before they are able to develop their coaching skills. Another explanation may be that the nurses that have been to the training need more time before they are ably to change their coaching behavior. Note again that at the time of the posttest. the training program was not yet concluded. Further analysis of the data, especially combination of the gain scores with background variables, as well as interviews with some of the participants, may clarify this interesting result.

Conclusions, Recommendations and How This Research Contributes to New Knowledge in HRD

Organizations are becoming more and more interested in evaluating their training programs at the level of behavioral change, for which 360-degree feedback is often suggested as a possible method. However, critical reflections on this purpose of 360-degree feedback can also be found in literature (see for example McLean et al, 1993). In this paper the possibility of 360-degree feedback to measure behavioral change was the object of study. Contrarily to what was expected, this study indicated more behavioral change for the control group than for the experimental group. Still, this study has provided more insight in the psychometrical properties and the usefulness of 360-degree feedback. However, further experimental research is necessary, especially with a larger number of respondents than was the case in this study and with the possibility to randomly select ratees, to answer the question whether 360-degree feedback is indeed useful for training evaluation.

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Theory-driven Evaluation: An Alternative

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While researchers have advanced our ability to understand the effectiveness of Human Resource Development (HRD) interventions, practitioners are still in search of an evaluation model capable of accounting for the complex relationship that exists between HRD interventions and intended outcomes. The purpose of this article is to offer theory-driven evaluation as an alternative to existing HRD evaluation models. In order to overcome the problems faced by the existing models, this alternative not only establishes a casual link between HRD interventions and outcomes, but also goes further to address contextual factors affecting the intervention (Chen &Rossi, 1989).

Keywords: HRD Evaluation, Theory-driven Evaluation, Review

The field of Human Resource Development (HRD) has faced the issue of demonstrating that HRD interventions are directly contributing to organizational functioning. Therefore, evaluation of HRD interventions has become a critical issue in the field (Holton, 1995). It is imperative that HRD evaluators have the tools available to demonstrate the utility of HRD efforts. A review of the evaluations models available to HRD practitioners and academicians revealed that few models were available. And while recent evaluation strategies have expanded our ability to explain the effectiveness of HRD interventions, there still exists a need for an evaluation model capable of accounting for the complex relationship that exists between HRD interventions and intended outcomes. To examine the common evaluation models and strategies used within the field of HRD, a literature review was conducted. Based on the review, theory-driven evaluation is presented as an alternative evaluation approach.

Evaluation Models in HRD: A Review

To better understand the problem facing evaluators, a literature review was conducted to explore common models used in HRD evaluation. The review focused on the Academy of Human Resource Development (AHRD) conference proceedings for the years 1995-2001. The review revealed that the most common evaluation strategies in HRD include: Kirkpatrick's four level typology (Kirkpatrick, 1976), Holton's integrated model (Holton, 1995), the Performance-Learning- Satisfaction evaluation approach (Swanson & McClernon, 1996), Critical Outcome Technique (Swanson & Mattson, 1997), and various financial benefit assessments (Brauchle & Koenecke, 1999; Jacobs & Hruby, 1996; Swanson, 1998).

The most salient result of the review of the literature was the reliance on Kirkpatrick's four level evaluation model. Briefly defined, Kirkpatrick's hierarchical model has four levels: reaction, learning, behavior, and results. Reaction is what the trainee thought of the training intervention. Learning is the quantifiable indication that learning has taken place. Behavior is the assessment of the transfer of what is learned in the training intervention into practice. In other words, are the skills learned in training being used on the job? Results indicate the impact of the training on the desired objectives (Kirkpatrick, 1976). While the methodologies for the evaluation varied, Kirkpatrick was the guiding model in many cases (Hastings & Nichols, 1995; Moore, 1999; Nurmi, 1999; Ravishankar & Miller, 1997). In a broader literature review, Preskill (1997) found that 77% of journal articles pertaining to evaluation models contained Kirkpatrick's model.

While Kirkpatrick's four level model is a popular basis for research, the model does not go uncriticized. The model is often sighted as a mere taxonomy of possible intervention outcomes in need of further research to fully develop the theory (Holton, 1995). Furthermore, in practice the taxonomy is rarely fully implemented (Rothwell, 1996). A survey of evaluation practitioners revealed a narrow range of practices, indicating that the method most commonly used to evaluate interventions was class evaluations or "smile sheets" (Rothwell, 1996). Similarly, Dixon (1987) reports that when conducted at all, evaluation usually takes the form of participant reaction.

While criticism for Kirkpatrick's model was abundant, alternative evaluation models were scarce. In an attempt to strengthen Kirkpatrick's model beyond a simple taxonomy of results, into one that is able to account for causal relationships, Holton (1995) presented an integrated evaluation model. The integrated model adds intervening

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variables that influence the learning and transfer process that have been identified as affecting HRD interventions. This model is a step in the right direction, in that it moves away from a simple input/output model. While the integrated model presented by Holton is much more inclusive than the simple four level approach that proceeded it, several questions are left unanswered. First, this integrated model does not address characteristics of the intervention. Cervero (1985) suggests that processes in the design and implementation of the intervention should be related to the outcomes. In other words, this model does not account for the type or length of the intervention. Second, there is little room in the model for intervening variables other than those specified. The model does allow for unnamed external events to be added, otherwise, the model is a fixed set of relationships that does not allow situationally specific variables to be added.

A third model identified in the literature review was the Performance-Learning-Satisfaction (PLS) evaluation system (Swanson & McClernon, 1996). The PLS system identifies five major elements, one of which is an evaluation model. The model specifies the three domains (performance, learning and satisfaction), and then further breaks them down. For example, learning is broken down into knowledge and expertise, performance is divided into business results and financial results, and satisfaction is divided in to participant's satisfaction and sponsor's satisfaction. The PLS system also contains an evaluation plan, evaluation tools, an evaluation schedule and an evaluation report (Swanson & McClernon, 1996). While this model offers a comprehensive system for approaching an evaluation, it is based on the simple input/output concept, which has been criticized in Kirkpatrick's evaluation typology.

A fourth model that has been presented as an alternative to Kirkpatrick's four level taxonomy is the Critical Outcome Technique (COT) (Swanson & Mattson, 1997). The post-hoc evaluation technique is designed to systematically investigate performance outcomes. The purpose of COT is the investigation of intervention outcomes through definition, inquiry, verification and valuation of outcomes. This model has the potential to be a practical alternative for practitioners who need simple evaluation results, after the intervention has been conducted. A pilot test of the COT model revealed that the model resulted in information that was useful to intervention stakeholders (Mattson, Quartana, & Swanson, 1998). Additional results provided possible refinements to the original model.

Other evaluation methods identified in the literature review focused on demonstrating the financial benefits of HRD (Brauchle & Koenecke, 1999; Jacobs & Hruby 1996; Swanson, 1998). This information is needed to change the notions that HRD is simply an optional activity and the cost of such interventions is greater than the resulting benefits (Swanson, 1998). Brauchle and Koenecke (1999) present an overview of contemporary Return-On-Investment (ROI) approaches. The list of possible approaches includes a basic model, a cost/benefit ratio model, and benefit-forecasting model.

While this literature review has focused on evaluation models or strategies appearing in the AHRD conference proceedings, other evaluation models must also be considered. In a recent publication, Russ-Eft and Preskill (2001) comprehensively review eleven evaluation models and approaches. Furthermore, Hilbert, Preskill, and Russ-Eft (1997) present a comprehensive review of evaluation models proposed in the last four decades. Included in this review are Kirkpatrick's four level model and Holton's HRD integrated evaluation model, which are models also appearing in the conference proceedings review. However, seven other models not found in the proceedings were included in the Hilbert, Preskill, and Russ-Eft review including: Hamblin's five level model, Training effectiveness evaluation system, Binkerhoff six stage model, Input, process, output model, Richey model, Kaufman, Kellor, Watkin's five level model, and the Training efficiency and effectiveness model. This review concludes that evaluation has "focused on a limited number of questions, using only a few tools and methods" (p. 145).

This literature review reveals that evaluators have few alternatives to Kirkpatrick's simple taxonomy of outcomes. Furthermore, the available models do not account for the complex relationship that exists between HRD interventions and intended outcomes. While Holton's (1995) integrated model is moving in the right direction, even more is needed to fully account for the complex evaluation context. Preskill (1997) reiterates the concern about the few evaluation approaches available by noting how rarely "HRD professionals and scholars have tapped other disciplines such as public education and the government or military in their development of evaluation theories, models and approaches" (p.51). The problem then, is that evaluators have few models to choose from and the available models do not fully account for the complex HRD intervention context.

Purpose

The purpose of this paper is examine the evaluations models available to HRD practitioners. This review reveled the dominance of simplistic evaluation models. More specifically, the models identified in the review can be classified as "black box" evaluation models, which focus primarily on input/output relationships, leaving out variables of context. The one-variable black box evaluation may be able to establish a connection between the HRD

intervention and outcomes, but it fails to explain the relationship. In order to build causal explanation, causal moderators or intervening variables need to be defined. Including such moderators results in a more complete understanding of the organizational conditions, individuals, and characteristics of programs that are the most likely to produce the desired outcomes (Cervero, 1985). The channels through which the program achieves (or fails to achieve) the desired results can then be mapped. By answering the "why" question evaluators will be able to contribute to our understanding of how to plan effective HRD interventions (Cervero, Rottet, & Dimmock, 1986). The problem is that HRD evaluators need evaluation models that open up the black box, resulting in information that can contribute to better program design.

Theoretical Framework

To address the problem identified above, theory-driven evaluation is presented as an alternative theoretical framework.. In order to overcome the problems faced by the existing models, this alternative not only establishes a casual link between HRD interventions and outcomes, but also goes further to address contextual factors affecting the intervention (Chen &Rossi, 1989). Theory-driven evaluation is a significant contribution to the evaluation practitioner because it attempts to move evaluation away from the black box evaluation, and answers questions about why the program worked. The remainder of this paper takes an in-depth look at theory-driven evaluation.

Theory-Driven Evaluation: An Alternative

Chen and Rossi (1983) developed the concept of theory-driven evaluation as a process capable of incorporating existing theoretical knowledge into the evaluation process. Theory-driven evaluation has been a movement of critical importance in the last two decades, in that it is a broader perspective of evaluation that has been conceptualized in the past (Chen, 1994). Central to theory-driven evaluation is the use of an intervention theory to examine the expectations of the intervention (Reynolds, 1998). Intervention theory is essentially a blueprint of how the HRD intervention is supposed to work. In other words, it is a "plausible and sensible model" of the intervention (Bickman, 1987, p.5). This model outlines the relationships between the treatment and outcomes. Additionally, other factors such as intervening and contextual variables are included (Chen & Rossi, 1989). The complete model should be a broad view of the channels through which the intervention will achieve the desired results. Theory-driven evaluation will be further explained in terms of the components of the intervention theory and the process involved in conducting the evaluation.

Components of an Intervention Theory

The intervention theory is a complex model that has several key components. These include: the problem, intervention strategies, and expected outcomes (Mohr, 1995). In addition to the three main elements of the model, other variables, intervening and exogenous, must also be specified (Chen &Rossi, 1983). A more detailed discussion of the each of these components follows.

*Three Main Components.*When the development process is complete, the intervention theory must include specification of three main elements, the problem, intervention strategies, and the expected results (Mohr, 1995). First, the problem should be defined including behavior to be addressed, where appropriate, and the population for whom the intervention is targeted. In addition to the "what and who" of the problem, the context in which the problem is located must also be considered. The description of problem context will be useful in explaining or interpreting the empirical findings of the evaluation study (Chen & Rossi, 1989). Second, the intervention content, or the elements of the intervention that will produce the effect must be outlined. It is important to identify the intervention as planned (Chen & Rossi, 1989). It will be shown later that the planned intervention can be very different from the implemented intervention. Finally, the intended or expected effects of the intervention must be clearly defined (Reynolds, 1998). The specification of outcomes deserves special attention. Mohr (1995) names the comprehensiveness of outcomes identified, as a factor that could increase utilization of evaluation results. It is well known that intervention outcomes are not always easy to identify, and the possible outcomes could be numerous. The process whereby the multiple intervention outcomes are specified should be a joint effort between stakeholders and the evaluators (Chen & Rossi, 1989). The evaluator has a special role in this process, and that is the consideration of unexpected and potentially negative effects of the intervention that stakeholders may overlook.

Other Variables in the Model. In addition to the three main elements, intermediate or intervening events must also be well specified (Mohr, 1995). Intermediate or intervening variables are factors that link the activities of the intervention with the intended outcomes (Mohr, 1995). For example, if an HRD intervention is designed to reduce absenteeism through increased work motivation, both the intervening variable (increased motivation) and the outcome variable (decreased absenteeism) must be included in the model, as well as the proposed relationship between the two. Not all models will have intervening variables as a part of the intervention theory. However, when intervening variables are present they should definitely be included in the model. The specification of intervening variables is beneficial in that a model that is well specified is more sensitive when tested (Chen & Rossi, 1983). That is, a model that includes each of the intervening steps can be used to determine exactly how an intervention worked or did not work. The intervention theory can then be used to track success, or for revision of the intervention as needed.

There should also be consideration given to what Chen and Rossi (1983) term "exogenous variables" (p.286). Exogenous variables are factors correlated with treatment variables that could also have an impact on the outcome variable. These variables are included because the outcomes of the complex social interventions are rarely the result of the treatment and intervening variables alone (Chen &Rossi, 1983). The effect of the correlation between these variables and the treatment can be eliminated by the use of a classical randomized experiment. However, randomization is often not possible in applied settings, and the inclusion of the variables in the intervention theory can further explain the intervention contexts and outcomes.

The Process of Theory-Driven Evaluation

Now that the concept of intervention theory has been explored, it is important to understand the process involved in conducting the evaluation. The process of conducting a theory-driven evaluation can be broken down into four steps, including the development of the intervention theory, implementation analysis, selection of relevant outcomes, and use of appropriate methodology. It is important to remember that each of the steps in the process is linear. In other words, each step relies on the successful completion of the previous step.

Development of Intervention Theory. The formulation of the intervention theory is an important first step, creating the foundation of the evaluation. The theory should be constructed with input from a variety of sources. First, the evaluator should look to existing literature for research findings that address similar problems, treatments or outcomes as the evaluation in question (Chen & Rossi, 1989). Also useful are pre-existing social science theories that pertain to the intervention theory being developed. Finally, the evaluator must seek input from intervention stakeholders and intervention designers. Often these individuals can provide unique insight into how the intervention was designed to address the problem (Chen &Rossi, 1989). During this process each of the intervention theory components should be defined. The resulting theory should outline the conceptual framework that is guiding the intervention and subsequently will guide the evaluation.

Implementation Analysis. The implementation of the intervention must also be carefully reviewed (Mohr, 1995). Implementation analysis is used to insure that the intervention activities are in place to bring about the desired outcomes (Mohr, 1995). In other words, it is a procedure used to determine if the HRD intervention is actually being conducted as specified during the development of the intervention theory. Chen & Rossi (1983) note that an intervention can look very different in theory than it does in practice. To illustrate, the authors cite instances in which "evaluators have found that some programs were never implemented, others were placed in the hands of inappropriate personnel, and in others implementation effectively negated the program process" (p.303).

The implementation system must be evaluated because it is a component that necessarily precedes all other components of the intervention theory. If the implementation analysis reveals that the intervention is not being conducted, or that major discrepancies exist between the intervention theory and the actual intervention, the evaluation process should be halted and the intervention theory developed should be revisited and revised. There is no need to continue to explain relationships between components in the model if the model is known to be incorrect.

These discrepancies in intervention implementation happen because of the complex implementation system that support the intervention. These systems consist of administrative rules and regulations, bureaucratic structures, and personnel who are responsible for intervention delivery (Chen & Rossi, 1983). Fortunately, the intervention activities tend to be open and easy to observe. This allows the implementation analysis to be a relatively simple process, requiring few of the evaluation resources (Mohr, 1995). Scott and Sechrest (1989) have further specified

that the treatment strength should be considered including, intervention specificity, intensity, and duration among other factors.

Determining Relevant Outcomes. As noted earlier, when the intervention theory is being developed, all possible outcomes should be identified. This list should include both positive and negative potential outcomes (Chen & Rossi, 1989). However, it will not be possible to submit all outcomes identified to actual research (Mohr, 1995). Instead the evaluator and stakeholders must collaborate to choose from among all outcomes identified, selecting only those most relevant. This is a decision that should be made with input from stakeholders so that the most relevant outcomes are selected. Careful selection of outcomes to be tested has the potential to increase utilization of evaluation results (Mohr, 1995).

Selecting Appropriate Methodology. Once established, the intervention theory can be confirmed or denied by investigating the linkages between the elements of the theory. Theory-driven evaluation is unique in that it does not rely on one type of research methodology (Chen &Rossi, 1989). Instead, a variety of research methods can be used to develop and test the intervention theory. In fact, because of the comprehensive nature of heory-driven evaluation, multiple methods are often needed to complete the entire process. Quantitative methodologies have dominated the discussion of appropriate methodology and will be discussed here. However, it should be noted that qualitative methods hold great promise in the future of theory-driven evaluation.

There are several techniques that have proven useful for theory verification. Causal modeling is one technique used to verify the intervention theory. Causal models can take several forms including, linear structural relations (LISREL), confirmatory factor analysis, latent variable structural models, and path analysis (Lipsey & Pollard, 1989). The use of causal modeling techniques requires that each of the components in the model be a variable. In other words, the components must vary in such a way that different levels have different values for each component (Lipsey &Pollard, 1989). This leads directly to the second requirement, which is that variables must be quantifiable, so that the differing levels or values for each component can be identified (Chen & Rossi, 1989). The advantage of using causal modeling is that it forces evaluators to get specific on the intervention theory components and the relationship between those components. Furthermore, advanced computer programs are available to assist the evaluator when testing the model. Lipsey and Pollard (1989) also present a simpler form of causal modeling called the "basic two-step" (p.320). The basic two-step narrows the focus of the evaluation to include the first intervening variable in the intervention theory, that is, the variable that is expected to change as a direct result of the treatment. The second "step" is the more distant variable that is expected to be impacted as a direct result of the changes in the first intervening variable. This technique broadens the range of a simple "black box" evaluation considerably by considering major mediating variables, but is not as likely to explain complex intervention contexts (Lipsey &Pollard, 1998).

A second methodological approach used in conducting theory-driven evaluation is known as Confirmatory Program Evaluation (Reynolds, 1998). This approach is also used to establish causal relationships between program, intervening variables, and identified outcomes proposed in the program theory, specifically in the post-program stage and periods of follow-up. While the exact process for conducting a confirmatory program evaluation is beyond the scope of this paper, the process is very similar to the causal modeling techniques described previously (the interested reader is referred to Reynolds, 1998). The process may be applied to experimental, quasi-experimental, or non-experimental data. One benefit of this approach is the ability to strengthen causal inferences "in most quasi-experimental and non experimental designs" (Reynolds, 1998, p.207).

Third, Mohr (1995) presents methodology designed to generate measures of effectiveness or adequacy. These two measures are based on a comparis on between actual results and the counterfactual, the state of the world without the intervention. For this comparison to be complete Mohr advocates the use of a control group. While the identification of this control group is often a difficult task, and by far the strongest limitation of this evaluation strategy, Mohr does offer many strategies for working with quasi-experimental designs. In addition, regression-discontinuity designs, and time series designs have been offered as strategies for evaluation when no control group is available. The benefit of this rigorous process is the ability to attribute causality to findings, if and only if designs are meticulously executed.

Conclusions

Introducing theory-driven evaluation as an alternative to available HRD evaluation models holds great promise. Like the Holton (1995) integrated model, theory-driven evaluation goes beyond a simple input/output model to consider important contextual factors affecting the intervention. The unique contribution of theory-driven

evaluation is the ability to consider a broader range of influences on intervention success in a situationally specific way. Theory-driven evaluation has many advantages, however, it will not be appropriate for every evaluation situation. Considering the advantages and disadvantages of the model can help determine when it is an appropriate evaluation strategy.

Advantages

The advantages of using theory-driven evaluation are numerous. First, the process of developing an intervention theory allows for detailed specification of the problem and the target groups. This process may assist intervention developers with specifying the reasons for the intervention in question. Furthermore, the intervening or causal mechanisms that are designed to address the problem also must be specified. So the way in which the intervention leads to expected outcomes must be clearly defined. This approach allows for the success or failure of the theory to be established, and also answers the question of why a theory did or did not work. Included in this is the distinction between the failure of the intervention to have a causal impact and the failure of the theory to operate in the way specified.

However, as Finney and Moos (1989) point out, "the greatest benefit of a theoretical foundation for evaluation research is a very practical one- the enhanced usefulness of findings" (p.314). More, specifically, findings can help make instrumental changes to improve and develop the intervention and also influence the way intervention stakeholders conceptualize the problem and the intervention.

Limitations

Of course theory-driven evaluation is not appropriate in every evaluation context. The barriers to the use of this type of evaluation are quite serious. Bickman (1989) identified multiple barriers to use. First, increased costs can be incurred from activities such as, a lengthy planning session, the development of measurement tools and the collection of data on the various components of the model. Second, the evaluator must be technically competent in the strategies used to implement a theory-driven evaluation approach. In addition, the evaluator is expected to be knowledgeable in the problem and treatment literature. This creates the need for evaluators who are technically competent in evaluation research techniques as well as HRD. In this situation it is possible for the evaluator to be more knowledgeable about the intervention and it's content than the intervention developer. This could lead to role confusion as there are not yet clearly defined role specifications (or limitations) for the theory-driven evaluator. Patton (1989) stresses that theory-driven evaluation, which results in generalizations about causal linkages are very applicable in some situations, but not all situations. He points out that simpler evaluation models are sometimes more appropriate.

Implications for HRD

Theory-driven evaluation can contribute to new knowledge in the field of HRD in two ways. First, it may be possible to generalize the results of the evaluation to other situations (Chen &Rossi, 1989). In other words, if desired outcomes were produced through specified intervening variables, it may be possible to replicate the findings in similar intervention situations. Second, knowledge can be generated which contributes to the broader body of evaluation knowledge (Chen, 1994). This generation of new knowledge is crucial to the development of program evaluation as a field, and in turn to the field of HRD.

Future Research. The most obvious next step in the incorporation of theory-driven evaluation into the field of HRD is the use of the theory in an applied setting. Chen (1994) reiterates this need, calling for more research examples in various evaluation situations. The application of this model can be used to test the utility of the various methodologies presented. It must be noted however that the possible methods mentioned here are by no means a comprehensive set. The list of possible methodologies should be expanded to include qualitative and mixed-method designs. A second line of future research is also needed to identify intervening variables common to HRD interventions. This list may include known organizational and individual factors that could have an influence on the desired outcomes.

Implications for Practitioners. Theory-driven evaluation has the potential to change to practitioner's role in evaluation quite a bit. There is need for highly trained evaluation practitioners with the skills to carry out the rigorous evaluation designs. This involves qualitative skills needed for the development of the intervention theory,

as well as, quantitative skills to test the intervention theory. While the theory-driven evaluation process maybe more demanding on practitioners, the result is a comprehensive understanding of the problem, the intervention and the outcomes produced.

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Creation and Utilization of Evaluative Information for Organizational Learning

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From the literature review on organizational learning and evaluation, this paper defines the meaning of organizational learning and examines organizational conditions enabling the organization to promote learning at different levels and in various ways. This paper attempts to explain the linkage between organizational learning and evaluation by emphasizing the function of evaluation as a process of creating, distributing, and utilizing evaluative information. In addition, the conditions that influence evaluation to better function for organizational learning are investigated.

Keywords: Organizational Learning, Evaluative Information, Evaluation Use.

Today's organizations have been experiencing dramatic changes (Marquardt & Berger, 2001). Diverse forces, such as rapid development of technology, a more comparative and globalized market, and increased workforce diversity influence organizations internally and externally for changes (Dixon, 1992; Schwandt & Marquardt, 2000). To survive in this ever-changing society, organizations should be able to adapt and respond to changing conditions and learn and transform continuously.

Learning in the organization becomes more critical with increased complexity of internal and external environments (Sullivan, 1999). Organizations are not any more entities simply controlled and managed depending on a linear system model (Hudson, 2000). Inside and outside of the organization, many influences are interacting each other and all influences are changing dynamically. It becomes much less predictable to determine organizational situations, for instance economic trends, global markets, and internal/external customer needs. Today's organizations coping with escalating changes and complexity cannot help but have a focus on continuous organizational learning and development.

In order for the organization to learn, each organizational member should learn first. Although organizational learning is more than accumulation of all individual learning, it calls for individual changes in thinking and behavioral ways. With respect to the notion of lifelong learning, it is important that every person should be in a position to keep learning and need to have continuous learning opportunities throughout his or her life (Maehl, 2000). People accustomed to stability and permanence in the workplace may be more likely to face unanticipated problems and increasing demands for changes. They could lose even their jobs unless they deal with these unexpected problems and demands effectively. Over the past decade, many organizations have undertaken numerous kinds of layoffs in scale with various names of organizational interventions, such as reengineering, merger and acquisition, and downsizing, etc. It is essential for the organization as well as for him and her to determine whether he or she, as a member of the organization, can learn effectively and efficiently.

From the viewpoint of strategic alliance and management, all functions of the organization ought to be integrated with each other to achieve organizational goals, and its system and culture should be able to maximize all employees' capabilities to contribute to the organization's success (Gilley & Maycunich, 1998). Since organizational learning is a critically emerging organization goal, organizations need to consider the extent to which all functions and people in their organizations are ready to complete the goal and enhance it. In this sense, evaluation also should be a part of strategic organizational process. Preskill and Toress (1999b) propose that evaluation should and can be a means for enhancing learning in organizations. They believe that organizational learning will occur when organization members are involved in collaborative, communicative, and reflective evaluation processes (Preskill & Toress, 2000).

Evaluation has been performed in numerous ways and on different purposes. In general, it is believed that there are mainly three different types of evaluation use based on the purposes they serve, which are instrumental use (decision support and problem solving function), conceptual use (educative function), and symbolic use (political function)(see Leviton & Houghes, 1981 for details; Weiss, 1998b). However, as Shulha and Cousins (1997) indicate in their literature study on evaluation use, there is the emergence of a conception of evaluation as a continuous information dialogue. They discover that there are more frequent occurrences of evaluators and

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stakeholders sharing responsibility for generating, transmitting, and consuming evaluation information. This supports the aspect that there is a growing need to reconsider the roles of evaluation with regard to organizational learning and improve the ways in which evaluative information should be created, communicated, and utilized.

Purpose of the Paper

Because evaluation is a critical component for organizational learning, it should gain more attention as an effective way of creating and sharing information/knowledge and promoting learning. In this regard, the purpose of this paper was to examine how evaluation can play a pivotal role to enhance organizational learning by reviewing the related literature. More specifically, this review was guided by the following questions: 1) What are important organizational conditions to enhance organizational learning? 2) What is the main function of evaluation to enhance organizational learning? 3) Under which conditions can evaluation better function to enhance organizational learning?

Organizational Learning

There have been variations and even confusion in defining organizational learning. Before detecting the meaning of organizational learning from the literature, it might be worth mentioning a difference between organizational learning and learning organization. Although organizational learning and learning organization are used interchangeably in many forms of literature, they are different concepts. Preskill and Torres (1998) describe the difference as following.

> When we talk about learning organizations, we focus on the what, and describe systems, principles, and characteristics of organization that learn as collective entities. Organizational learning, however, refers to how organizational learning occurs, that is, the skills and processes of building and utilizing knowledge. It is particularly concerned with the ways in which learning is created and shared. (p. 42)

Organizational learning has a focus on a process of how organizational members learn at various levels and in different ways, whereas learning organization refers to a product as a representation of a desired end of organizational learning (Shwandt & Marquardt, 2000).

Definitions of Organizational Learning

Over time various definitions of organizational learning have been offered that help to better understand the process of learning in the organization (Jenlink, 1994). As pioneers in the organizational learning field, Argyris and Schon introduce the concepts of single, double, and deutero-learning (1996; Argyris, 1998). The organization able to do deutro-learning considers as a learning organization, since deutro-learning means comprehensive, systematic, and continuous learning. This type of learning may often occur every place in the learning organization ideally. Argyris and Schon explain the composite process through which and how the organization responds to external and internal influences and develops its own learning system.

Huber (1990) articulate four constructs related to organizational learning -- knowledge acquisition, information distribution, information interpretation, and organizational memory (p. 88). He views organizational learning as processes of creating, distributing, interpreting, and databasing information/knowledge in multifaceted ways. Although he spends much room to explain the elements of "know acquisition", his main point is to declare how effectively the information mechanism within the organization can be developed and work for learning.

Nonaka and Takeuchi (1995) propose a conceptual framework for managing dynamic aspects of organizational knowledge creation processes. They argue that organizational knowledge results from a continuous dialogue between tacit and explicit knowledge. According to Nonaka (1994), existing organizational learning theories are just related to "internalization", which is a process of transforming explicit knowledge into tacit knowledge. In other words, most organizational learning theories mainly focus on explaining how to obtain information/knowledge and why people take actions in certain ways. However, Nonaka and Takeuchi (1995) attempt to expand the notion of organizational learning by suggesting a holistic approach that describes a continuous and intensified interaction between different types of knowledge at individual, group and organization levels.

Schwandt and Marquardt (2000) suggest an organizational learning model based on Parsons (1960)'s general theory of action. Schwandt (1993) define organizational learning as "a system of actions, actors, symbols, and

processes that enables an organization to transform information into valued knowledge which increases its long run adaptive capacity" (p. 8). They emphasize the organization system's ability enabling adapt to its internal and external conditions. The system's ability includes a creative learning capacity through the transformation of information into knowledge and a performance-orientation.

Although the organizational learning theories reviewed here have different focuses and perspectives in explaining the concept of organizational learning, three central points can be derived. First, as a major learning source, information and knowledge should be generated, distributed, and utilized at various levels in the organization. Next, it is critical to develop comprehensive and systematic understanding of interrelations between different types of information/knowledge. Lastly, the organizational capacity or ability for learning plays an important role to manage and facilitate the organizational learning function and system.

Conditions for Organizational Learning

It is significant to identify under which conditions information and knowledge can be better created, distributed, and utilized at various levels, and to know what factors need to be considered to promote organizational learning. According to Senge (1990), in order to be a learning organization, the organization should embrace and implement five disciplines. They are systems thinking, personal master, mental models, building shared vision, and team learning. "Systems thinking" refers to a concept for understanding patterns of events and behaviors to know how to improve them. This discipline is the most emphasized one among the five disciplines, since he believes that this is an essential to integrate all disciplines into each other and to fuse them into a coherent theory and practice of the organization. Without systematic understanding, it is evident that there is no motivation as well as channel to see how the disciplines interrelate to enhance each other and to lead to organizational learning.

Watkins (1996) emphasizes organization capacity, motivation, and slack as three triggers for organizational learning. According to her, learning occurs when the organization is able to learn (capacity). Learning is critically influenced by organizational motivation at various levels (motivation). And, organizational learning takes place when financial, technological, or human reserves have spare resources to learn (slack). The organization able to learn may be externally and internally well motivated and have abundant learning resources at various levels. Marsick and Watkins (1999) address various ways to achieve organizational learning. For instance, work redesign, change of reward systems, flatter structure, and team work, etc. are suggested as means of enhancing organizational learning. Senge's view provides useful conceptual principles enabling the organization to be a learning organization and gives a thinkable room to link desirable concepts to practice. However, Marsick and Watkins offer more tangible guidelines to improve organizational conditions for learning based on their case studies and consulting experiences.

Other studies about organizational learning or learning organization show that organizational culture, leadership, formal education programs, and informal learning opportunities critically influence learning in the organization. These are in a supportive position for Senge and Watkins' perspectives overall. Regarding organizational culture, both studies of Lancaster (1998) and Argyris (1998) indicate that employees often perform unsuccessfully when threatened or embarrassed. Griego (1999) also found that rewards and recognition were essential aspects of building a learning organization. According to him, organizational members were more likely to define their workplace as a learning organization when they felt their tasks was appreciated, rewarded, not punished for mistakes. A learning oriented atmosphere or culture, which includes active organizational efforts to promote as well as allow learning with an amount of risk taking, is considered as a key influence on organizational learning. Other studies show that how critically organizational learning is associated with some factors such as leaders or peers' support (Brooks, 1992; Ellinger, Watkins, & Bostrom 1999; Griego, 1999; Holton & Kaiser, 2000), formal training and educational program (Brooks, 1992), and informal or self-directed learning (Confessore & Kops, 1998; Durr, Guglielmino, & Guglielmino, 1996; Marsick & Watkins, 1990).

In short, the main organizational learning conditions required or recommended throughout the literature to enhance organizational learning are systematic support, empowering, communication (sharing), and collaboration. The organization's leadership and culture need to be learning flavored and the organization should be able to offer various methods and channels for organizational members to be involved in making information and decision and to share their knowledge and experiences so that learning occurs across the organization.

Evaluation

In order for evaluation to enhance organizational learning, evaluation itself needs to be learning oriented and thus effectively create evaluative information. Moreover, information and knowledge generated through evaluation should be disseminated at various levels and be used for organizational learning.

Evaluative Information for Organizational Learning

Evaluation is a process of systematically assessing the operation and/or the outcomes of evaluend (a person, a thing, an idea) against a set of explicit or implicit criterions (Weiss, 1998a). Through evaluation, evaluators generate mainly evaluative information and knowledge of evaluend. Evaluative information means information and knowledge with amount of valuing and judging. In effect, evaluation does not intend only to generate evaluative information. Like Chen (1989)'s claim, in some cases, it should be a critical part of evaluation to understand a nature of a program and develop a theory of the program. Patton (1997) asserts that the most important ele ment for the success of evaluation is to identify and meet major evaluation clients' needs. In addition, evaluative information can be generated without borrowing a form of evaluation. For instance, critical inquiries, reflection processes, and communications with other organizational members help to estimate a phenomenon and result in creating and distributing evaluative information or develop an evaluative consensus of the phenomenon (Toress, 1994 ; Preskill, 1994, 1999b).

However, evaluation is the mo st formal, systematic, comprehensive, and professional way to generate, distribute, and utilize evaluative information. As already mentioned in the previous section, without a process of acquiring or producing information and knowledge, organizational leaming cannot take place. In terms of organizational knowledge construction and intellectual growth, evaluation can play a significant role by creating and consuming evaluative information. Evaluative information and knowledge generated and shared through evaluation should lead to program development and organizational change (Cronbach and Associates, 1980). It is obvious that evaluative information ought to be a critical learning source to foster diverse types and levels of learning and help to apply them to visible actions.

Furthermore, evaluation should embrace ample opportunities of creation, distribution, and utilization of evaluative information for evaluators and stakeholders. Preskill and Torres (2000) suggest that when organization members are involved in the evaluation process that is collaborative and guided by dialogue and reflection, learning occurs not only at the individual level but also at the team and organization level. This suggestion means in order that evaluative information can be effective within and outside of the evaluation boundary for organizational learning, the evaluation process should be learning-centered by offering diverse chances to share and develop evaluation participants' knowledge, skills, and attitudes on evaluend collectively as well as individually.

Conditions to Generate and Utilize Evaluative Information for Organizational Learning

In this section, the author discusses that under what conditions evaluative information and knowledge can be better created, dis tributed, and utilized to enhance organizational learning. Rogers and Hough (1995) argue that evaluation focus, methods, and management should reflect realistic assumptions about how organizations work. In a similar viewpoint to Rogers and Hough, Jenlink (1994) claims that evaluation needs to take place based on understanding how the organization learns and it should function to transform the organization to be a learning organization. Rogers and Hough (1995), and Jenlink (1994) stress that it is crucial to take into account the organization' context in terms of its learning infrastructure or "architecture", so that evaluation functions for organizational learning in considering the organization's nature and being integrated with the place where it is implemented.

The organization capacity for learning through evaluation is also critical to produce and use evaluative information as the organization learning ability is essential when organizational learning occurs (Torress, Preskill, & Pionek, 1996). It is not productive and effective to engage in evaluation processes unless the organization is ready to use evaluation results and learn from evaluation practice. In this sense, evaluators and stakeholders need to determine the extent to which the organization has the readiness for learning through evaluation.

Moreover, Preskill and Torres (1999b) investigate in which ways evaluative inquiry can contribute to the maintenance and development of organization (see also Shulha, 2000 ; Rossman & Rallis, 2000). They focus on the four elements of organizational infrastructure, which are leadership, forms of communication, systems and structures, and culture (1999a, 1999b, 2000). According to them, when evaluation is employed as a means of accumulation of information for organizational learning and development, these four organizational elements are essential to implement evaluation effectively and change the organization to be learning-focused.

Several other researchers study the factors that influence the evaluation process for organizational learning. As highlighting enlightenment of stakeholders and formative evaluation process, Owen and Lambert (1995) claim that negotiation of an evaluation plan, heightening awareness, synergetic techniques of reporting, and guidelines and ongoing personal level support are important conditions to assist with strategic decision-making committed to organizational learning and change. Shulha and Cousins (1997) also provide their insights on what affect creation as

well as utilization of evaluation information and findings. They identify predictors for evaluation use and cluster the predictors into ten categories such as: quality of evaluation implementation, credibility, relevance, communication, user involvement, potential for information processing, clients' need of information, anticipated degree of program change, perceived value of evaluation as a management tool, and contextual characteristics of the decision or policy setting (p. 196). Evaluation is required to consider more and more complicated situations and conditions to promote learning rather than simply match evaluation clients' questions with a particular method and approach. And, several articles show the ways in which evaluation can bring out successful creation and utilization of evaluative information as involving participants in the evaluation process and creating information with collaborative team working (Cousins, Donohue, & Bloom, 1996; Fetterman, 1994; Scriven, 1997).

The organizational conditions that the author mentioned in the previous organizational learning section can be applied to enhance organizational learning through evaluation. In other words, well-customized applications of systematic support, empowering, collaboration, and communication to evaluation processes help to better generate, distribute, and utilize evaluative information for organizational learning. With a broader and comprehensive concern, contextual understanding of the organization and organizational readiness for learning through evaluation are considerable elements to maximize creation, distribution, and utilization of evaluative information to lead to numerous types and levels of learning across the organization.

Contribution to HRD Research and Practice

There have been academic efforts that suggest alternative views to expand the HRD evaluation field (Holton, 1996; Kaufman & Keller, 1994), since HRD evaluation theories and practice have been pretty much dominated by Kirkpatick (1998)'s well known four level evaluation model. In this sense, the attempt to link evaluation and organizational learning can bring out beneficial possibilities to develop the existing HRD evaluation theories and practices. As a more systematic and comprehensive evaluation, learning oriented evaluation approaches give critical insights to consider evaluation as a continuous information creation and utilization process for organizational learning and development. However, there are not many practical applications and experimental evidences of how this discussion can influence action and performance improvement and make actual changes in the organization. These approaches seem to be even idealistic or conceptual (Shulha, 2000).

For further research, it is necessary to know how evaluative information should interrelate and interact with different types of information and knowledge to promote organizational learning. More empirical evidences supporting the power of evaluation to foster organizational learning need to be mixed with concrete concepts and sound principles. Additionally, the linkage between information/knowledge and action/performance through evaluation should be more defined and developed.

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The Effects of Performance Feedback upon Small Businesses: A Literature Review

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This review explores literature related to performance feedback in small businesses. It investigates the relationships and significance of performance feedback to the theory and practice of Human Resource Development (HRD). It studies research of performance feedback in larger organizations, and it identifies concerns about the lack of such research specific to small businesses. This review also exposes the need for further study of performance feedback in small businesses and the implications for HRD.

Keywords: Performance Feedback, Small Businesses, Employee Development

Businesses, regardless of size, location, or type, strive to be successful. This success depends, to a very large part, upon the degree of employee performance. Practitioners in the field of Human Resource Development (HRD) recognize the importance of employees and promote many techniques and methodologies to help assure enhanced performance by them. HRD professionals constantly study business environments in their seeking of improvements in the performance of personnel. One area of study that is of particular importance in the business arena involves the feedback of performance data between employees and their supervisors.

Problem Statement

Much research has demonstrated that there is a positive link between improved productivity and the provision of effective feedback processes. There are substantial amounts of empirical research regarding the relationship between employee feedback and performance in larger organizations, but more research should be conducted in small businesses (Westhead & Storey, 1996).

It is generally accepted that the performance feedback process and the method of communicating performance feedback are key components to effectively develop human resources. However, one of the key issues in HRD is the identification of the specific factors that influence the performance of employees. These factors include, but are not limited to, communicating; coaching; conducting career workshops and supervisory training; developing and implementing effective feedback systems, critical incident programs, and goal setting processes; and increasing personal motivation at all levels of an organization. This review explores some of these factors that affect employee performance.

Theoretical Framework

Various theories support the concepts that feedback to employees provides many benefits, including the improvement of their job performances.

Goal Setting

The establishment of performance goals is one tool in the process of effective employee performance feedback. Setting goals and tracking accomplishments towards these goals are especially effective when mutually developed and when the feedback is ongoing and it involves all parties.

Research has demonstrated that the setting of sensible, clear, short- and long-term goals is a trait or habit of successful people and organizations. These people recognize that goals are not easy to achieve and that they can fail to reach them. They also know that goals require taking risks. Seldom does anything positive occur without the taking of intelligent, well-conceived risks. Further, he risks demand sacrifices, such as time, money, reputation, or other resources. But, reaping rewards in the future typically demands making careful investments today. The fruits of setting goals and of making changes go to those who prudently take the risks and make the wise investments (Wax, 1997).

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The theory of goal setting proposes that motivation can be affected positively by utilizing goals. Employees' efforts and their focusing of attention, persistence, and selection of work strategies are all improved when well-conceived goals are properly presented and acted upon.

Locke and Latham (1984) state that goal setting is a theory "that helps to explain why other motivational techniques or approaches... work" (Locke & Latham, 1984, p. 107). According to them, goal setting is pivotal for the success of other motivational approaches, including job enrichment, organizational behavior modification, participation, and monetary incentives. These approaches are contingent upon the inclusion of goal setting for their successes (Locke & Latham, 1984).

As an example, in endeavoring to modify employee behavior, the recognition of the presence of goals helps direct employee behavior until either the goal is accomplished or else it is rejected or modified. Other researchers of motivation agree that goal setting is a well-supported theory of motivation in the workplace (Harris & DeSimone, 1994).

As a motivational tool, goal setting is extremely valuable. It achieves results, but the results are not automatic. As any tool, goal setting must be utilized properly. To be successful, goals must be set systematically and used effectively. If done so, goal setting can improve productivity, stimulate creative problem solving, and increase satisfaction, confidence, and pride (Locke & Latham, 1984).

Organizational Development

Providing feedback to employees is often prompted by the need to initiate and manage change.

Ivancevich and Matteson (1997) employ the term "organizational development" (OD) to refer to "the process of preparing for and managing change" (Ivancevich & Matteson, 1997, p.614). They further refine their definition by including long-range planning for improved operations through better utilization of the resources of the organization. They list three sub-objectives of OD: changing values or attitudes, modifying behavior, and inducing change in the structure and policy of the organization (Ivancevich & Matteson, 1997).

Organizational development has been defined by Harris and associates "as a process used to enhance the effectiveness of an organization and the well-being of its members through planned interventions" (Harris & DeSimone, 1994, p. 414). The latter part of this definition deals with intentional and planned interventions, such as introducing and implementing employee feedback mechanisms. In some instances, these are called intervention strategies. Regardless of terminology, these represent a task or a series of tasks undertaken by an organization (or a segment of an organization) where the goals are related to the improvement of the organization. Accordingly, planned intervention or intervention strategy is the primary method by which changes are made and improvements occur to the organization (Harris & DeSimone, 1994). These changes and improvements are critical components of any successful employee performance feedback system.

Beckhard offers his definition of organizational development as "...an effort [that is] planned, organization-wide, and managed from the top to increase organization effectiveness and health through planned interventions in the organization's 'processes,' using behavioral-science knowledge" (Beckhard, 1969, p 9). His definition mandates planned change through systematic diagnoses, the development of strategic plans aimed at improvements, and the mobilization of resources to implement the plan. In addition, it involves the total system. Even though a change may focus upon a subpart of an organization, the system to be changed is the total, autonomous entity that is essentially free to determine its own plans and future (Beckhard, 1969).

Leadership

Successful performance feedback is unlikely to occur without effective leadership from within the organization.

From Jack Welch, the highly respected and successful former Chairman and Chief Executive of General Electric Corporation: "I simply dislike the traits that have come to be associated with 'managing'.... The word manager has too often come to be synonymous with control – cold, uncaring, button-down, passionless. I never associate passion with the word manager, and I've never seen a leader without it" (Lowe, 1998, p. 72). "I don't run G.E. I lead G.E. (Lowe, 1998, p.74)."

In the Wall Street Journal, Welch is described as "a combination of charismatic preacher, all-knowing judge, internal ombudsman and hard driving coach" (Murray, 2000, p. A8). Welch, himself, describes a CEO as being equivalent to an orchestra leader. He continues with his principles: "Always meet targets, don't accept mediocrity, embrace change, [and] don't cling to tradition" (Murray, 2000, p. A8). His dedication to leading and to accepting change at General Electric is echoed throughout the article.

The first step in changing an organization is to scrutinize every product, service, process, market, customer, personnel training and development program, the use of all information, and every other component of the organization for the end of its useful life. (Cendron, 1999).

Culture

The culture within an organization must accept and actively endorse performance feedback as positive, enriching experiences. The alternative is resistance and ineffective change.

Culture, as found in business organizations, is established during many years and is founded upon many different stories and interpretations. As such, it is difficult to change. This resistance to change is, in fact, one of the strengths of a business culture. But, correspondingly, it also is a weakness. Culture within a business organization can be changed, but doing so demands much time and extensive, careful leadership. The people at the top of the organization must be intimately involved and must be seen as being truly committed and involved in the change. But the leadership cannot rest solely at the top; it must permeate down through all levels of the organization. Unless everyone actively advocates for a particular change, it will be ignored as a passing executive fancy (Nadler et al., 1995). In business, nothing replaces solid leadership.

Motivation

The appropriate use of feedback can yield substantially improved employee attitudes and motivation.

In studying motivation, Abraham Maslow's hierarchy of needs (Maslow, 1970), ranked the needs of people into a hierarchy, each level having to be satisfied before motivation will advance to the next level. Maslow ranked the needs in his hierarchy according to their apparent importance, placing the most important ones, the physiological needs, at the bottom. His theory holds that until these needs are satisfied, the other needs do not play a significant role in motivation. Maslow's hierarchy of needs is relevant to the study of performance feedback, because feedback from others effects the highest levels of the hierarchy of attainment satisfaction.

Hackman and Lawler (1971) found that every higher-order need they studied was positively and significantly related to the satisfaction of feedback. However, they found little agreement in the area of which jobs provided the highest level of feedback

Frederick Herzberg (1959) developed the two-factor theory of motivation where hygiene factors were found to have little influence on motivation and motivation factors were found to provide motivation. Hygiene factors include such things as supervision, working conditions, interpersonal relationships, pay, security, and company policies. His motivation factors include achievement, recognition, the work itself, responsibility, advancement, and growth. Although the results of the study remain controversial, they are important to consider when examining performance feedback systems, because they relate directly to recognition, to the possibility for increased responsibility, and to advancement and growth.

Science-Based

Rensis Likert's (1967) work centered on science-based organizational theory emerging from the research findings on management and organizational performance and the implications for labor/management relationships. Likert's theories are important to evaluate, because his research considers areas of employee involvement in business decisions and the relationship of organizations' success based on management styles.

Research Questions, Purpose, Design, and Data Collection

The purpose of this literature review is to explore the research related to performance feedback in small businesses and to consider the implications of performance feedback to HRD theory and practice. The following questions were determined:

1) What is the theoretical framework for researching performance feedback?
2) How do employees and employers benefit from performance feedback?
3) What research findings can help the HRD practitioner develop methods and programs to improve relationships using performance feedback in small businesses?

ABI Inform, Psyc Info, ERIC, and EBSCO Host were used to review the scholarly literature. The terms used to conduct the searches included Performance Feedback, Performance Evaluation, Employee Development, and Small Businesses.

Methodology

This literature review was conducted using a meta-analysis of the current research pertaining to performance feedback in small businesses.

Literature Review

Job Performance

According to a study by Minter and Thomas (2000), communication and job performance improves when employees are provided with immediate feedback and consultation. Job performance tends to be directly related to the quality of relationships between the individuals involved. Providing feedback has been identified as being essential for the success of positive working relationships among workers and managers (Deming, 1986; Likert, 1967).

Employee Importance

Arthur Anderson and National Small Business United funded a nationwide research study of small and mid-sized businesses entitled "Trends for 2000." The participating organizations were asked to name their most significant challenges to future growth and survival. The top challenge was in finding and retaining qualified workers (61%), followed by state and federal regulations (35%) and economic uncertainty (29%). The respondents then indicated the methods they used to motivate employees. The answers also included providing a team atmosphere (63%) and providing a greater sense of purpose (56%) (Arthur Anderson & National Small Business United, 2000). This survey helps validate the importance of employees and employee performance in the world of smaller businesses.

Coaching

The appraisal of performance appears to be used extensively in business to evaluate and track the outputs of employees. From "Leader to Leader", a publication of the Drucker Foundation and Jossey-Bass (1992), the Paradox of Performance Appraisal advocates that the stand-alone performance appraisal is counter-productive and should be replaced with a variety of tools and delivery systems that are more effective. One of these is coaching, which, the author contends, should replace performance ratings, except when they are required by regulation, union contract, or are particularly appropriate in individual circumstances, such as a probationary appraisal for new employees. Coaching is not easy to accomplish effectively, but, unless this method is not used, performance appraisals by themselves will fail to accomplish their intended roles (McGehee, 2001).

Encouraging and providing feedback, coaching, and communicating with employees has long been acknowledged as beneficial in providing positive working relationships with employees (Deming, 1986; Likert, 1967). Some previous studies in organizational behavior have attempted to relate, more precisely, how coaching or providing feedback affect job performance (Vroom, 1964; Ilgen, Fisher, & Taylor, 1979).

Minter and Thomas (2000) advocate that the coaching process be employed to aid in the effectiveness of performance evaluation systems. Their definition of coaching includes a deep respect for all subordinate individuals and trusting that subordinates have the abilities to solve their own problems. If subordinates truly believe that their managers are understanding and cooperative, job performance will improve.

According to Meyer, Kay, and French (1990), coaching should be a day-to-day activity and goal setting, rather than criticism, should be used to improve employee performance. They also recommend that evaluations should have but one singular purpose. Their study presents the following conclusions:

1) The evaluation process has too many intended uses and purposes.
2) These uses and purposes are in conflict with each other.
3) An evaluation discussion does little to influence future job performance.
4) Job performance improves when mutually agreed upon goals are established.

Training

The training of supervisors to properly use the performance feedback system is extremely important to the HRD practitioner. Beyond this, McGehee (2001) advises businesses to train everyone about useful feedback, to provide

open systems and structures that encourage feedback, and to use other tools to stimulate commitment to improvement efforts throughout every organization.

Watson Wyatt, a management consulting firm in New York, conducted a study of 1,020 medium to large companies in North America and studied 17 of those in depth. It found that career workshops were among those activities that led to greater productivity in employees (Comeau-Kirshner, 1998).

Participation

Other research has recommended several approaches to improve the performance feedback process. McGregor (1990) encouraged that subordinates become active in the evaluation processes by taking responsibility for developing a plan for themselves and determining their own potential. McGregor's research strongly supports the use of Management by Objectives (MBO).

Practitioners recently have published articles relating to the various issues pertaining to performance evaluation. Continuous feedback provides employers with very real and important opportunities to inform employees how successfully they are doing their jobs, feedback that employees, in general, truly desire. (Laumeyer, 1999). Pardue (1999) urges the development and use of performance evaluation systems that are truly participative in nature. Pardue (1999) reports that well documented performance appraisal forms help defend various employment decisions. Longer-term performance diaries have been recommended as an effective aid to performance raters for several decades (Bernardin & Walter, 1977; DeNisi, Robbins, & Cafferty, 1989).

Levinson (1990) recommends from his research that a detailed critical incident process be used to carefully document all incidents of behavior, both good and bad, and done as they occur. These incidents should be discussed with employees at the time of the occurrence in order to provide immediate feedback. This will help the employees to correct small problems before they develop and expand into larger ones. Levenson purports that these documented data then can be used during a subsequent review time to substantiate the details.

Needs

Levinson (1990) also suggests that the psychological needs of individuals be taken into consideration during the performance evaluation process. As an example, the supervisor should not only be asking questions pertaining to the individuals' personal life goals but should also be inquiring as to what makes them feel good about themselves. Levenson's premise for recommending this is that each person is working towards the attainment of his or her individual psychological needs. Therefore, the highest level of individual motivation will arise when a parallel relationship exists between the needs of an individual and those required in the job and by the employing organization.

Results and Findings

The survival of any business, large or small, depends upon the effective performance of tasks by its employees. Without feedback, however, employees usually are unable to maintain or improve the desired quality and quantity of their work.

As a result of the comprehensive literature review, it is evident that there is a substantial lack of research data on performance feedback that pertains specifically to small businesses.

All research studies that were explored in this review unanimously endorse the validity of performance feedback processes when designed and executed properly. These studies indicate that the benefits accrue to both employers and employees. However, given the scant amount of research on performance feedback in the small business environment, the assumption that these benefits apply to this group may not be accurate.

Conclusions and Recommendations

"Small businesses (firms with fewer than 500 employees) employ 53 percent of the private, non-farm work force, contribute 47 percent of all sales in the country, and are responsible for 51 percent of the private gross domestic product" (National Small Business United, 1999).

Small businesses contribute greatly to the economy of our country and contribute trillions of dollars worth of economic power annually to the global market. American small business ranks third in the world of economic powers, behind only that of the U.S. as a whole and that of Japan. The number of these operations is rapidly increasing by about three-quarters of million each year. Most of the new employment in the private sector is from

small businesses. The popularly expressed failure rate of small businesses is a myth; in fact, nearly 70 percent of all firms beginning in 1985 were still in operation after 10 years (Megginson, Byrd, & Meggison, 2000).

A recent survey by Arthur Anderson and National Small Business United of small and mid-sized businesses disclosed that 61 percent of employers expressed that finding and retaining qualified workers was their greatest challenge to growth and survival (Arthur Anderson, 2000).

The value of effective performance feedback systems is well accepted in HRD and large businesses. It has been illustrated that job performance improves when attention is given to employees through feedback, consultation, and coaching. However, the benefits of such feedback have not been evident in the realm of small businesses. Small businesses may not reap the same benefits as do their larger counterparts, mainly due to lack of money, staffing, and time to conduct effective performance feedback. A real need exists for additional study to expand the knowledge of performance feedback, specifically as it relates to the small business environment.

Implications for HRD

The value of effective performance feedback systems is well accepted in the HRD and business worlds. HRD practitioners often work in a consulting role to small businesses. For HRD professionals to effectively develop and assess feedback processes for small businesses, they first must have appropriate background information related to performance feedback. However, the scant amount of research regarding performance feedback processes in small businesses tends to limit the effectiveness of the HRD consulting efforts to smaller business entities. The purpose of this review is to demonstrate the opportunities and needs for further research of performance feedback in small businesses.

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